

Claims

1. A cytomegalovirus vaccine which comprises a fusion peptide composed of a T helper epitope fused to a CMV CTL epitope peptide.
2. A cytomegalovirus vaccine of claim 1 wherein said T helper epitope is PADRE.
3. A cytomegalovirus vaccine of claim 1 wherein said T helper epitope is a tetanus epitope.
4. A cytomegalovirus vaccine of claim 3 wherein said tetanus epitope is selected from the group consisting of tetanus heavy chain (590-603), tetanus heavy chain (615-629), tetanus heavy chain (639-652), tetanus heavy chain (830-843), and tetanus heavy chain (947-967).
5. A cytomegalovirus vaccine of claim 1 wherein said CMV pp65 CTL epitope peptide is selected from the group consisting of pp65₁₃₋₂₄, pp65₁₈₆₋₁₉₆, pp65₁₈₈₋₁₉₅, pp65₂₆₅₋₂₇₅, pp65₃₆₃₋₃₇₃, pp65₃₆₉₋₃₇₉, pp65₃₆₇₋₃₇₉, pp65₄₉₅₋₅₀₃ and pp65₄₁₇₋₄₂₆.
6. A cytomegalovirus vaccine of claim 5 wherein said CMV pp65 CTL epitope is pp65₄₉₅₋₅₀₃.
7. A cytomegalovirus vaccine of claim 1 which further comprises a DNA adjuvant.
8. A cytomegalovirus vaccine of claim 6 wherein said DNA adjuvant is selected from the group consisting of SEQ ID NO:8, SEQ ID NO:9 and SEQ ID NO:10.

9. A cytomegalovirus vaccine of claim 1 which further comprises a pharmaceutically acceptable carrier.
10. A fusion peptide comprising a T helper epitope fused to a CMV CTL epitope peptide.
11. A fusion peptide of claim 10 wherein said T helper epitope is PADRE.
12. A fusion peptide of claim 10 wherein said T helper epitope is a tetanus epitope.
13. A fusion peptide of claim 10 wherein said tetanus epitope is selected from the group consisting of tetanus heavy chain (590-603), tetanus heavy chain (615-629), tetanus heavy chain (639-652), tetanus heavy chain (830-843), and tetanus heavy chain (947-967).
14. A method of modifying the immune response of a mammal to CMV comprising administering an effective amount of a vaccine of claim 1.